Q2300 Ethernet QoS Access Router

Q-SERIES™

For Ethernet/DSL/Cable Services

The Q2300 router makes low-cost broadband services practical for business. Until now, business-class routers have been expensive and overly complex to set up and use, while consumer-level DSL and cable-modem routers have lacked business-quality monitoring, control, and security capabilities. The Q2300 router changes all this by combining the features of an IP router, QoS appliance, IPSec VPN appliance, firewall, and Ethernet switch into one easy-to-use network access device.
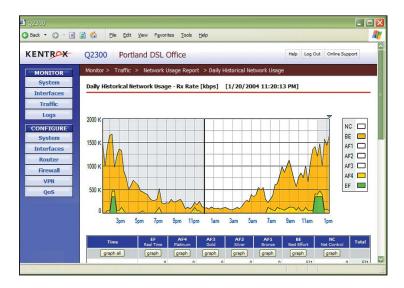

Figure 1: Graphical reports show network statistics and trends at a glance.

Quality of Service support for VoIP and other critical applications—right out of the box

Mission-critical applications and delay-sensitive traffic, such as VoIP and video, can degrade significantly when competing with bursty web traffic for WAN bandwidth. The Q2300 is pre-configured to provide priority queuing and traffic shaping to ensure high-priority traffic takes precedence over less critical applications. Traffic can be classified with user-created policies, making it easy to prioritize traffic to meet your needs.

Business-class network access

Easy-to-use graphical interface

Best-in-class QoS reports

- **High-performance IP Router**
  Virtual Private Networking (VPN)
  Network Address Translation (NAT)
  Intuitive CLI for scripting
  VLAN support for 8 LAN subnets
  Static, RIP, and OSPF support
  Ethernet WAN, PPPoE capable

- **QoS Appliance**
  Traffic reports and graphs
  Auto DiffServ/ToS priority queuing
  Class-based weighted fair queuing
  User-configurable QoS policies
  Prioritization of VoIP and video traffic

- **VPN Appliance**
  100 IPSec tunnels
  Encryption (DES, 3DES, AES)
  Hardware acceleration for DES/3DES
  Windows XP IPsec client support

- **Stateful Packet Inspection Firewall**
  Packet filtering (access control lists)
  Intrusion Detection System (IDS)
  Denial of Service (DoS) protection
  Application Layer Gateways (ALG)

- **Ethernet/DSL/Cable Services**
  Bandwidth monitoring and control
  Alarms and diagnostics

- **Managed Ethernet Switch**
  Four 10/100 Ethernet LAN ports
  Auto-sensing, auto-polarity

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Figure 2: Up to 100 IPSec VPN tunnels mean flexibility and cost savings.

Simple, low-cost installation

Traditional routers, security devices, and network access equipment can be difficult to set up, and often require special training. That can be problematic for many businesses that are trying to reduce support costs or do not have on-site expertise.

The Kentrox Q2300 router is designed to simplify install-ation with its intuitive GUI, making it faster and easier for both network administrators and less experienced installers. Advanced feature configurations, such as VPN tunnels, firewall, and QoS policies, are also made simpler by the router's GUI.
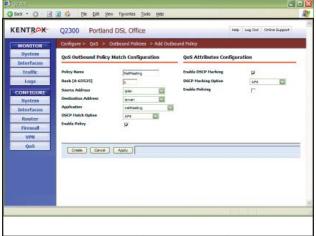

Figure 3: The graphical interface presents configuration options for simpler setup.

Embedded, Web-style GUI simplifies management

The Graphical User Interface contains powerful tools to troubleshoot problems, run QoS reports, make configur-ation changes and reload configurations, set up traffic-shaping policies, or just check the health of the network.

Accomplishing these tasks with command line-driven products can be difficult and time-consuming. Arranged logically and intuitively by function, the router's GUI is point-and-click easy.

Protect internal systems from intrusion

To protect internal networks from outside intrusion, the router conceals LAN IP addresses using Network Address Translation (NAT). It also has an integrated Stateful Packet Inspection (SPI) firewall. The router firewall includes Intrusion Detection System (IDS) capability, which identifies and blocks common attacks. Application Layer Gateways (ALG) pass common traffic types while preventing unwanted traffic from entering the LAN.

VPN support

With Virtual Private Networks (VPNs), you can take advantage of the cost savings associated with transmitting communications over IP services. The Q2300 secures up to 100 VPN tunnels with standards-based IPSec encryption (DES/3DES/AES) and authentication. The router supports direct VPN connections with computers running Windows XP Service Pack II IPsec clients.

Its VPN support is designed for Virtual Private Networks Consortium interoperability and conformance. Dedicated hardware accelerates DES/3DES encryption for optimal performance.

Fine-tune network performance with QoS monitoring and reports

The Q2300's graphical reports let you monitor traffic performance at each established QoS priority level to see whether the critical traffic flows are getting the bandwidth they need. The report data helps you identify performance problems and modify your QoS policies appropriately. To reduce bandwidth pinches, for example, you would simply view the current and historical performance reports, and adjust QoS policies as necessary to provide the appropriate amount of bandwidth for high-priority applications.
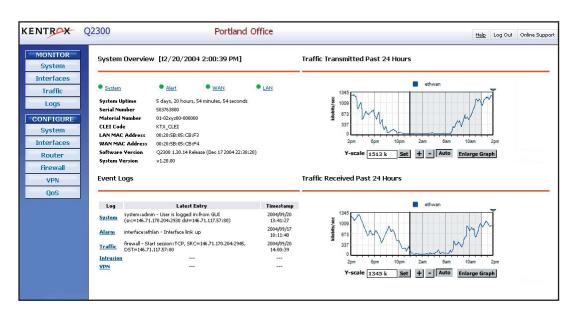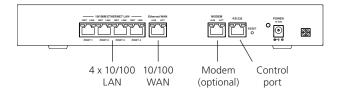
Figure 4: The Kentrox Q2300 router offers an intuitive, Web-style GUI to simplify setup and management.

4 x 10/100 LAN   10/100 WAN   Modem (optional)   Control port

Protect your network investment with support plans and technical training

To keep your network healthy and productive, Kentrox offers Kentrox Care Support Plans for our Q-Series™ access routers. Kentrox technical training courses are also available on site or at the Kentrox campus to help you get the most out of your Q-Series routers. For details, visit our website at **www.kentrox.com/services.**

ORDERING INFORMATION

DESCRIPTION	CATALOG #
Q2300 Ethernet QoS Access Router	2300
Q2301 Ethernet QoS Access Router with Modem	2301
Items included with the Q2300 and Q2301:	
- Documentation CD (includes Adobe® Acrobat® PDF versions of the Setup Guide, the User's Guide and the CLI Reference Guide)	
- AC-DC power adapter and cable for use in North America	
- One 6' Ethernet LAN cable, Cat 5E, UTP 568B	
- One CLI serial to PC adapter, RJ45 female to DE9 female (for use with external Ethernet cable)	
- Two #8 wood screws and anchors for wall-mounting	
Ethernet Cable, Cat 5E, 6'	93006212
Q2300 19" Rack Mounting Kit	77912
Q2300 CLI Serial to PC Adapter, RJ45 Female to DE9 Female (for use with external Ethernet cable)	77910

KENTROX CARE SERVICE AND SUPPORT	PART #
Onsite 7x24x4	13803
Onsite 5x8x4	13813
Onsite 7x24xNBD	13802
Onsite 5x8xNBD	13812
Basic 7x24xNBD	13804
Exchange NBD	13809
Onsite Installation	13820
Phone Installation	13830

KENTROX TECHNICAL TRAINING	PART #
Customer Site	
Basic Config & Maintenance Lecture, 1 day	133811
Advanced Config & Maintenance Lecture, 1 day	133812
Per student charge for lecture in excess of 8 students, per day	133819
Kentrox Campus	
Basic Config & Maintenance Lecture, 1 day	133851
Advanced Config & Maintenance Lecture, 1 day	133852

SPECIFICATIONS

INTERFACES
WAN: One 10/100Base-Tx (RJ45)
LAN: Four-port, 10/100 Ethernet switch (RJ45) auto-sensing, auto-polarity
Control port (CLI): One RS-232 (RJ45)
Modem (optional): One V.92 modem (RJ11C) for dial-in management

MANAGEMENT/ADMINISTRATION
GUI: Intuitive Web-style GUI (accessible from WAN or LAN)
Access Management: Three levels—admin, configure, view; up to 10 users with passwords
Logs: Alarm, System, Intrusion, Traffic, VPN Syslog support
SNMP: Traps, MIB II, I/F MIBs
Updates: Software updates via FTP or GUI
CLI: Intuitive command line interface (CLI) accessible via control port, Telnet, SSH, or modem
Real-time Clock: SNTP support and 8-hour power failure backup

FIREWALL
Protection Methods: Stateful Packet Inspection designed for ICSA compliance
Denial of Service (DoS)
Intrusion Detection System (IDS)
Blacklist
TCP and UDP packet filtering
NAT
Application Layer Gateways (ALG)
Policies: 50 user-configurable policies
Mapped IP: 16 mapped IP (virtual DMZ/port forwarding)
Zones: Trusted, Untrusted, DMZ

VIRTUAL PRIVATE NETWORK (VPN)
IPSec: 100 IPSec VPN tunnels
Internet Key Exchange (IKE)
Main and aggressive modes
Diffie-Hellman MODP groups 1, 2, and 5
Perfect Forward Secrecy (PFS)
IPSec NAT traversal
Authentication: Pre-shared key
X.509 certificates
Encryption: DES, 3DES, AES (128 bit), hardware acceleration for DES/3DES
Hash algorithms: MD5 and SHA-1

WAN PROTOCOLS
Protocols: IP or PPPoE

ROUTER
Routing: Static, RIP v1/v2, and OSPF
DHCP server, client, relay
DNS client, DNS relay
VLAN support for 8 LAN subnets
Load balanced on 4 equal cost routes

QUALITY OF SERVICE
Bandwidth Class-based Weighted Fair Queuing
Management: Auto DiffServ/ToS-based priority queuing
VoIP and video prioritization
All DiffServ classes supported
Configurable queue weighting
Marking: Configurable QoS marking
Policies: 32 user-configurable QoS policies for prioritization by source and destination addresses, port, protocol, DiffServ Code Point (DSCP)
Monitoring: QoS traffic reports and graphs
Configurable WAN Latency report
Standards: Supports 802.1P user priority and VLAN 802.1Q tags

DIAGNOSTIC LEDS (FRONT PANEL)
System: System status, security alert, modem status
WAN: Port status, Tx status, Rx status
LAN: Port status, Tx status, Rx status

PHYSICAL
Dimensions: 1.6" H x 11.8" W x 8.6" D (44mm H x 300mm W x 219mm D)
Weight: 3.8 lbs. (1.72 kg)
Power: Universal AC adapter, 100-240 VAC input, 50-60 Hz; power consumption: ≤ 20W
Mounting Options: Table-top, wall-mount or optional 19" rack-mount (1RU)

ENVIRONMENT
Operating: 0° to 50°C (32° to 122°F) 5% to 95% RH (non-condensing)
Storage: -20° to 66°C (-4° to 150°F) 5% to 95% RH (non-condensing)

REGULATORY
Emissions: FCC 47 CFR 15 Class A
Safety: ANSI/UL 60950-1-2002 CAN/CSA-C22.2 No 60950-1-03
Terminal: FCC 47 CFR 68 IC CS-03

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